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ABSTRACT

If social roles rather than biological destiny are responsible for sex differences in disease, then employed women should show patterns of illness similar to those of employed men, and different from those of housewives. Recent national mortality and morbidity data, however, do not indicate whether employed women are sicker or healthier than housewives, only that these two groups respond to illness differently. The data show that health-status differentials unfavorable to housewives are concentrated among older married women with no children at home. Women in this category have relatively limited domestic responsibilities: the "sick role" may offer them a socially legitimate alternative to paid employment. There is at present very little basis for concluding that women's assumption of male roles or life styles has negatively affected their mortality; on the other hand, there may be a basic flaw in the logic equating women's increased participation in occupational roles with their assumption of male attitudes and activities. Few women engage in occupational pursuits at the expense of their roles as housewives and mothers; perhaps the behaviors associated with these roles may provide their continued health protection. (Author/CS)

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SEX ROLES, EMPLOYMENT STATUS AND PATTERNS OF DISEASE

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Introduction

This paper will review relationships among sex roles, employment status, and patterns of disease as these relationships are reflected in published statistics and research reports. In order to provide a framework for this presentation, I will begin with a brief description of current sex differences in mortality and in reported morbidity.

In the United States, as in other developed countries, death rates among females have been substantially below male death rates at least since the beginning of the 20th century, and this difference in rates continues to increase (Spiegelman and Erhardt, 1974; Retherford, 1975). The largest sex mortality differentials are observed in the age groups 15-24 and 45-64, when men die at more than twice the rates observed among women of similar ages (Enterline, 1961; NCHS, Series 20-No. 15, 1973).

In marked contrast to their favorable mortality, women report markedly higher rates of illness and associated activity limitation than men of comparable ages, and make greater use of both physician and hospital services (Nathanson, 1977a).

Within the past several years, a great deal of scholarly effort has been directed to the problems of interpretation and explanation presented by these data (Nathanson, 1975; 1977a; 1977b; and In press; Verbrugge, 1976a; 1976b; Mechanic, 1976; Johnson, 1977; Kitagawa, 1977). The evidence that has been developed strongly suggests that sex differences in both mortality and morbidity arise, at least in part, out of differences in the attitudes and behavior that are culturally prescribed for men and women in our society. Sex role norms affect both the probability of exposure to health risks (men drive, drink, and smoke more than women, and are more often employed in hazardous occupations) and the probability of taking protective measures. Women are

more likely than men to be aware of illness symptoms and to take action in response to perceived symptoms, both factors which help to explain their higher levels of reported morbidity and may also contribute to their favorable mortality.

If this analysis is generally correct, it follows that variations in the social conditions and social roles of women both over time and contemporaneously within the same society should be associated with differences in their health status. (The same point holds true for men, of course, but the major focus of this paper is on women). This hypothesis is supported by studies in historical demography (Kennedy, 1973; Johansson, 1975), and by international comparisons of sex differences in mortality (Preston, 1976). In the United States, recent rapid declines in fertility, together with increasing proportions of married women, and women with young children, employed outside the home, suggest that fundamental changes may be occurring in the roles of women. The purpose of this paper is to examine the evidence for parallel changes in women's health status. More specifically, as women's roles become less differentiated from those of men, do sex differences in mortality and morbidity also decline? Two types of data bearing on this question will be reviewed. First, recent trends in sex mortality and morbidity differentials will be briefly described. Second, since women's entry into paid employment is, perhaps, the most clear-cut indicator of sex role convergence, the evidence for a relationship between employment and health is examined in some detail. If, indeed, social roles rather than biological destiny are responsible for sex differences in disease, then employed women should show patterns of illness similar to those of employed men, and different from those of women who are housewives.

Recent trends in sex mortality and morbidity differentials

Changing sex roles should have their earliest and most profound effects on causes of death that are most strongly influenced by the behavior of individuals. Gove (1973) has proposed three categories of socially induced mortality: 1) mortality due to overt social acts, including suicide, homicide, and accidents; 2) mortality associated with the use of socially approved narcotics, including cirrhosis of the liver and lung cancer; and 3) mortality associated with diseases requiring prolonged and methodical care, specifically diabetes. To this list, I will add cardiovascular disease, since it is both a major cause of death and one that has been attributed in part to behavior patterns associated with the male role, specifically smoking and a competitive achievement-oriented life style.

Sex mortality ratios for each of these causes of death for the years 1960-1974 are presented in Table 1. These ratios were calculated by Johnson (1977) based on age-adjusted death rates. The years 1960-1974 were chosen for this paper because they include the period of greatest recent change both in fertility and in women's occupational participation. With two exceptions, these ratios show no consistent evidence of convergence in male and female death rates from causes most subject to social influence. The two exceptions are lung cancer and diabetes. Diabetes has historically been the only leading cause of death with a male advantage, convergence in death rates for this cause comes about not through an increase in death rates among women, but through a decline, accompanied by some increase in male rates.

Speculation about the potential effects of changing female life styles on the mortality of adult women has centered particularly on cardiovascular disease, suicide, and lung cancer (House, 1974; Waldron and Johnston, 1976; Reeder, 1976). However, while lung cancer death rates are increasing

among women, accounting for the declining sex ratio for this condition observed in Table 1, there is no evidence for increases in death rates from either cardiovascular disease or suicide. Thus, the only support for the converging life style hypothesis as it affects mortality comes from the data on lung cancer deaths; the increase in these deaths is directly attributable to increases in the proportion of women smokers in each successive age cohort (NCHS, Series 10-No.59,1970; Gentleman and Forbes, 1974).

Much of the morbidity data employed in this paper comes from the continuing random sample surveys of the U.S. population carried out by the National Center for Health Statistics. Before examining changes over time in the indices of acute and chronic conditions used by the National Health Survey, it is important to emphasize two points that powerfully affect the interpretation of these data. First, in population based health surveys the presence of illness is determined from self-reports rather than from physical examinations or laboratory tests. Second, the criteria by which illness is defined are behavioral; the individual must have taken some action either to limit his or her "usual" activities or to obtain medical attention, for a condition to be counted as an illness. Consequently, any changes that are observed may be due as much to alterations in reporting tendencies or illness behavior as to changes in the true prevalence of particular conditions.

Bearing these problems in mind, sex ratios for acute and chronic conditions reported by persons aged 17-44 are presented in Figure 1. Acute condition sex ratios are given for the years 1962 through 1976, while chronic condition ratios are for 1968-1976 only. (A change in the definition of chronic conditions in 1968 makes this latter limitation necessary). Pregnancy is defined as an acute condition by the NHS, and has been excluded from these data.

This figure does suggest that a convergence of sex ratios toward equality (represented by the horizontal line across the middle of the graph)

may be occurring, particularly in the reporting of chronic conditions. This latter effect is produced by a relatively sharp rise in women's reporting of these conditions (spread evenly across all conditions) accompanied by a less pronounced increase in reporting of chronic conditions by men. Chronic conditions are defined on the basis of limitation in the individuals' "usual" activity, defined for adults as either housewifery or paid employment. It has long been thought that housewives may find it easier than employed persons to accommodate their usual activities to a chronic condition, and that they may, in consequence, be less likely to report activity limitation. The recent increase in limitation rates among women may reflect their gradual shift from domestic roles into roles that are less compatible with the persistent but relatively minor activity limitation caused by many chronic conditions. More detailed analyses of National Health Survey data would be required to test this hypothesis.

Employment, health, and illness among women

Women's entry into paid employment is the most dramatic index of their changing roles. In 1977, women constituted 41 percent of the labor force, as compared with 33.4 percent in 1960. The largest increases in participation rates have occurred among younger women and among women with young children. Furthermore, while occupational sex typing is still very much in evidence, the proportions of women in the learned professions has doubled since 1950; corresponding increases have occurred in the higher level business occupations.

The implications of these changes for patterns of illness and use of health services among women have only begun to be considered, and the data on which to base an evaluation of these implications either do not exist or exist only in relatively crude form. Employment is treated as an all or none category in most statistics; breakdowns by occupation are very limited, and almost no

consideration is given to full vs. part time employment or to the timing of employment in relation to women's life cycles. Health indices are seldom presented by employment and family status variables simultaneously. Women workers are frequently omitted from study populations even when they are part of the work population to be studied (Hunt, 1977).

The paucity of research in this area is also reflected in a lack of sustained analytical attention to the underlying significance of employment as a factor in women's health or to the circumstances under which occupational participation may or may not be beneficial. Ideology often appears to play a major role in the meaning attributed to women's employment outside the home. "Being a housewife makes women sick," states a noted authority on marriage and the family (Bernard, 1972:). The potential effects of employment on health have been construed both as positive, when the focus is on increased social ties and psychic gratification (Bernard, 1972; Gove and Geerken, 1977), and as negative, when the focus is on increased role responsibilities and the psychic strains associated with economic and professional competition (House, 1974; Mausner and Steppacher, 1973; Steppacher and Mausner, 1974). The question posed by these alternatives cannot be answered with existing data. These data do, however, point to some of the issues that will need to be confronted in the design of subsequent research.

In the majority of health surveys where employment has been included as a variable, employed women have reported fewer episodes of illness than housewives (Baetjer, 1946; NCHS, Series 10 - Nos. 1, 10, 15, 26, 38, 44; Rivkin, 1972). Examination of data from the United States Health Interview Survey for the period, 1962 through 1976, indicates that this difference is profoundly affected by the way in which illness is defined. Prior to 1968, respondents first reported on all sickness within a two week period and were only then asked whether the sickness had entailed any activity limitation or medical visits. In subsequent years,

the order of questioning was reversed, and respondents were first asked about activity limitation or medical care due to illness or injury, and only then were they questioned about the conditions that led to these health actions.

The effect of this procedural change on the relative rates of acute illness reported by employed women and housewives is shown in Figure 2. When the condition report is given first, then housewives, as expected, have more illness than women in paid employment, but when health actions are used as the filter for reporting an illness condition, then the expected relationship of the two rates is reversed. These data are consistent with the hypothesis that women in domestic roles find it easier than employed women to accommodate to illness without a sharp break in their accustomed routines. When a break in routine becomes the principal criterion for an illness to be recorded, then the most illness is reported by women whose accustomed roles are least compatible with the sick role.

Earlier I suggested that if ascribed social roles were responsible for sex differences in patterns of disease, then employed women should exhibit a pattern similar to that of employed men and different from that of housewives. As shown in Table 2, Health Interview Survey data for the period 1962-65 correspond to this prediction: acute illness rates for employed women are intermediate between the rates of employed men and housewives. However, more recent data, collected subsequent to the revisions in survey procedure that have been described, no longer resemble the predicted pattern; the highest rates of acute illness are now among employed women. This change is a result of the marked drop in acute conditions reported by housewives that came about when health action was made the criterion for recording of a condition. It is worth noting that the effect of this new procedure was to increase reported illness among the employed of both sexes in approximately the same proportions. Only housewives register a decrease.

Since employed women are likely to differ from housewives not only

in their illness behavior but also in their age distribution, marital status, and family size, differences in their reported morbidity cannot be adequately evaluated without also controlling for these variables. In a study limited to married women with children, Feld (1963) found that working women reported many fewer physical symptoms than women who were not employed. More recently, Ross (1978) carried out a similar analysis based on unpublished data from the 1971 Health Interview Survey. In these data, again limiting the comparison to married women with children, no relationship between employment status and reported illness is observed among women under 45, but in the 45-64 year old age group, housewives do report more illness than women who are employed.

The synergistic effects of family and occupational roles on illness behavior are particularly evident in studies that look at variations in illness behavior and health services utilization among employed women who differ in their marital and parental responsibilities. Rivkin (1972) found that working women's response to a recent illness was mediated by the presence or absence of children. Women with children reported fewer days of activity limitation but greater use of health services than women without children. This finding is interpreted consistently with Rivkin's hypothesis that women with many role responsibilities (e.g., children and working) will react to illness by seeking professional medical care rather than by self-treatment.

Age and marital status differentials in work loss days among employed women also suggest that illness response represents an adjustment to the relative demands of particular social roles. Employed women over the age of 45 have fewer days lost from work than younger women (NCHS, Series 10 - No. 71, 1972); single women lose fewer days than married women (Enterline, 1964). While absence from work is generally more frequent among women than among men, this difference is reversed when older single women are compared with men of the same age.

Patterns of reported illness behavior and health services utilization

among employed women vary by occupational status as well as by marital status and age. In Table 3, health indices are compared for four subgroups defined by occupational status (white collar vs. blue collar) and sex. Activity limitation and days lost from work due to illness are more frequently reported by women in blue collar jobs than by any of the other three sex-occupational status categories. Blue collar women also have the largest expenditures for hospital services, but white collar women spend more for office visits to physicians. As a consequence of variations in response to illness associated with sex and occupational status, sex differences in illness behavior are less marked among white collar than among blue collar workers. Data presented by Ross (1978) are consistent with this observation; it is among older women with less than a high school education that illness differences between employed women and housewives are most marked.

Discussion

The limitations of the data on which this paper is based cannot be overemphasized. The problems in interpretation of relationships between employment and health status that are created by the use of behavioral rather than clinical indices of morbidity are clearly illustrated by the reversal of this relationship that followed a change in the index. Employment in and of itself, without further evidence of the demands that it generates, of the social ties that it creates, or of its significance to the individual, is of limited value as a conceptual category. This same point applies with equal force to the role of housewife. Neither occupational nor domestic roles are unidimensional, although they are sometimes made to appear so.

Given these limitations, what can be said about the relationship of employment outside the home to women's physical health? First, and perhaps of most importance, presently available data do not permit us to say whether employed women are sicker or healthier than housewives, only that these two groups

respond to illness differently. Second, and here I enter onto shakier ground, I believe that variations in women's response to illness associated with differences in their age, marital, and parental roles are most consistent with an hypothesis that looks at illness behavior as a function of the total number and quality of role obligations.

Recent data show that health status differentials unfavorable to housewives as compared with employed women are concentrated among older married women with no children at home. Women in this category have relatively limited domestic responsibilities; the sick role may offer them a socially legitimate alternative to paid employment (Cole and Lejeune, 1972). This hypothesis receives further support from the observation that it is the least well-educated housewives in this group who have the highest illness rates; these women are also the least likely to have access to other roles outside the home (Komarovsky, 1967). Within the employed population, the most time away from work is reported by women likely to experience the greatest pressure from family responsibilities (younger married women) and the least pressure from job responsibilities (women in blue collar occupations). The number of days lost from work by employed women appears to reflect the particular balance they have achieved between home and occupational commitments.

These ideas suggest that the sick role may function as a kind of pressure valve that can be expanded, contracted, or manipulated to fill in the gaps left by other, less malleable, social roles. The value of this conception in accounting for the full range of illness behavior among women can only be tested in research designed specifically for this purpose.

Summary and Conclusions

A major purpose of this paper was to examine the evidence for health effects of women's changing social roles. This analysis was based on the proposition that if the attitudes and activities prescribed by traditional sex roles

norms are a factor in accounting either for women's relatively low rates of mortality or for their high reported morbidity, then changes in these attitudes and activities should be associated with corresponding changes in health status indices. The data available to test this proposition consist primarily of national mortality and morbidity statistics collected on a continuing basis.

There is, at present, very little basis for concluding that women's assumption of male roles or life styles has negatively affected their mortality. It may be that long range effects will yet appear. On the other hand, it is also possible that there is a basic flaw in the logic equating women's increased participation in occupational roles with an assumption of masculine attitudes and activities. The specific dimensions of male socialization patterns and adult roles that are associated with their increased mortality risks are only beginning to be identified; these dimensions may prove to be quite separable from and, indeed, nonessential to, the successful conduct of an occupational role. Furthermore, few women engage in occupational pursuits at the expense of giving up their traditional roles; most employed women are also housewives and mothers. Perhaps it is from the behaviors enjoined by these latter roles that they derive their continued health protection.

Finally, although the ambiguous significance of morbidity indices makes it difficult to draw any firm conclusions, there is certainly no evidence that increased occupational participation has, as yet, led to a decline in women's responsiveness to symptoms of illness (which would bring women's illness behavior more into line with men's). On the contrary, data from the Health Interview Survey indicates that employed women take better care of their health than either employed men or women who remain at home. If this continues to be true, then the future is unlikely to bring any marked increases in women's presently favorable mortality rates, despite their changing social roles.

TABLE 1

SEX RATIOS (MALE/FEMALE) BASED ON AGE-ADJUSTED DEATH RATES

FOR SOCIALLY INDUCED CAUSES OF MORTALITY, UNITED STATES, 1960 - 1974

Year	MORTALITY ASSOCIATED WITH: OVERT ACTS			SOCIALLY APPROVED NARCOTICS		PROLONGED CARE	OTHER
	Suicide	Homicide	Motor Vehicle Accidents	Cirrhosis of the Liver	Lung Cancer	Diabetes	Cardiovascular Disease
1974	2.72	3.76	3.05	2.13	4.26	0.96	1.82
1973	2.73	3.71	2.81	2.11	4.39	0.97	1.80
1972	2.59	4.20	2.75	2.17	4.53	0.95	1.80
1971	2.42	4.08	2.74	2.08	4.73	0.93	1.76
1970	2.54	4.03	2.85	2.06	5.04	0.94	1.78
1969	2.57	3.97	2.88	2.04	5.16	0.90	1.74
1968	2.69	3.94	2.95	2.00	5.47	0.92	1.73
1967	2.60	3.46	2.89	2.01	5.78	0.90	1.72
1966	2.74	3.25	2.90	2.05	6.04	0.88	1.70
1965	2.68	3.38	2.93	1.99	6.06	0.87	1.69
1964	2.86	3.30	2.88	1.99	6.40	0.86	1.67
1963	2.83	3.27	3.00	1.96	6.27	0.83	1.66
1962	3.00	3.19	2.97	2.04	6.61	0.85	1.64
1961	3.28	3.08	3.10	2.04	6.43	0.80	1.64
1960	3.32	3.04	3.14	2.10	6.67	0.80	1.62

Sources: National Center for Health Statistics. Vital and Health Statistics. Series 10- No. 20.

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TABLE 2

AVERAGE INCIDENCE OF ACUTE CONDITIONS

AMONG EMPLOYED MEN, EMPLOYED WOMEN, AND HOUSEWIVES, 1962-65 AND 1972-75

	YEARS	
	1962 - 1965	1972 - 1975
Employed Men	160.4	170.1
Employed Women	198.1	214.4
Housewives	224.7	191.3
RATIOS		
Employed Women/Employed Men	123.5	126.0
Housewives/Employed Men	140.1	112.5

Source: National Center for Health Statistics. Vital and Health Statistics. Series 10 - Nos. 10, 15, 26, 98, 102, 114.

TABLE 3

ILLNESS BEHAVIOR AND HEALTH SERVICES UTILIZATION

BY OCCUPATION AND SEX

INDEX	WHITE COLLAR			BLUE COLLAR		
	MALE	FEMALE	RATIO	MALE	FEMALE	RATIO
ILLNESS BEHAVIOR						
Restricted activity days per 100 persons per year	9.5	11.8	1.24	11.0	16.1	1.46
Bed disability days per person per year	3.5	4.5	1.29	4.0	5.9	1.48
Work loss days per person per year	4.4	5.1	1.16	6.1	7.9	1.30
HEALTH SERVICES UTILIZATION						
Physician expenditures per person per year (dollars)	52.0	63.3	1.22	38.5	57.7	1.50
Hospital expenditures per person per year (dollars)	27.5	35.3	1.28	29.3	57.5	1.96

Source: National Center for Health Statistics, Vital and Health Statistics. Selected Health Characteristics by Occupation, United States, July, 1961-June 1963. Series 10 - No. 21, DHEW, Washington, D.C. 1965.

FIGURE 1:

SEX RATIOS FOR ACUTE AND CHRONIC CONDITIONS
1962-1976

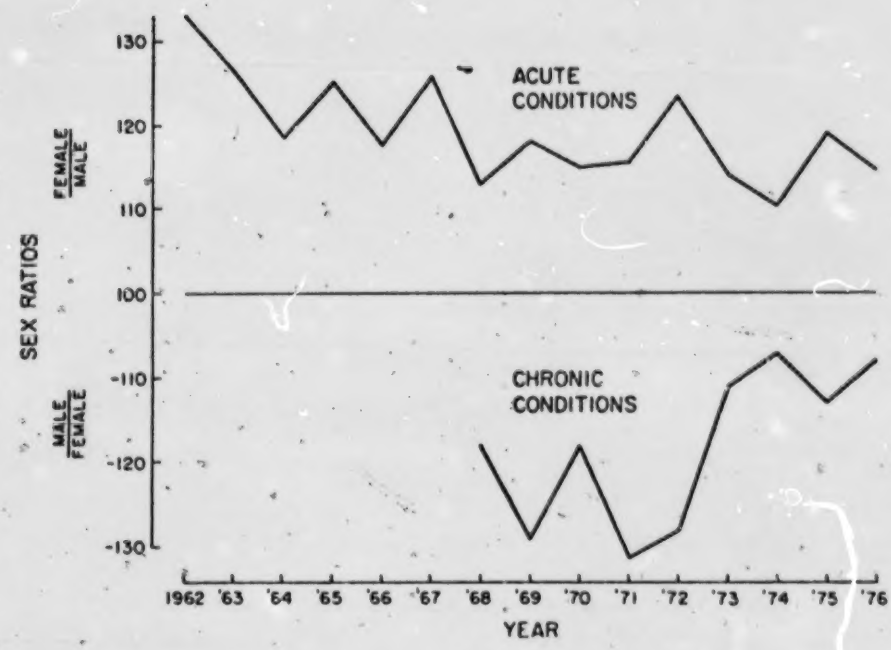
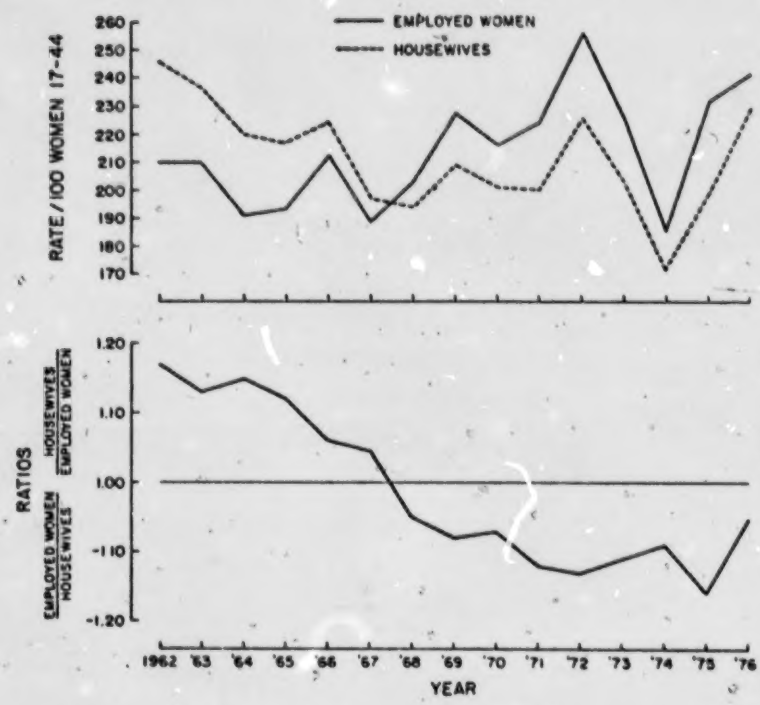


FIGURE 2

ACUTE ILLNESS AMONG
EMPLOYED WOMEN AND HOUSEWIVES
1962-1976



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